

**IN THE CLAIMS:**

Please amend the claims as follows:

- 1-19. (Canceled)
20. (Currently amended) An apparatus, comprising:  
an electrically conductive interconnect ~~formed~~ located either on at least a part of an  
insulating surface on a substrate or a (semi)conductive substrate that has been  
coated with an insulating layer; and  
at least one vertically aligned carbon nanofiber coupled to the electrically conductive  
interconnect.
21. (Canceled)
22. (Previously presented) The apparatus of claim 20, wherein the at least one  
vertically aligned carbon nanofiber includes a plurality of substantially vertically aligned carbon  
nanofibers.
23. (Previously presented) The apparatus of claim 20, further comprising a catalyst  
coupled to the at least one vertically aligned carbon nanofiber.
24. (Original) The apparatus of claim 23, wherein the catalyst includes at least one  
metal selected from the group consisting of nickel, iron and cobalt.
25. (Currently amended) The apparatus of claim 20, further comprising the substrate,

wherein the substrate includes at least one member selected from the group consisting of ~~silicon~~, quartz, sapphire and magnesia.

26. (Original) The apparatus of claim 20, further comprising the substrate, wherein the substrate is substantially optically transmissive.

27. (Original) The apparatus of claim 20, wherein the electrically conductive interconnect includes at least one refractory metal selected from the group consisting of W, Mo, Ta and Nb.

28. (Currently amended) The apparatus of claim 20, further comprising an electrochemical passivator coupled to at least a portion of a sidewall surface of the at least one vertically aligned carbon nanofiber.

29. (Original) The apparatus of claim 28, wherein the electrochemical passivator includes a dielectric layer including at least one member selected from the group consisting of SiO<sub>2</sub>, Si<sub>3</sub>N<sub>4</sub> and a polymer.

30. (Previously presented) The apparatus of claim 28, wherein a tip of the at least one vertically aligned carbon nanofiber is not passivated.

31. (Previously presented) The apparatus of claim 20, further comprising a buffer between the at least one vertically aligned carbon nanofiber and the electrically conductive interconnect.

32. (Original) The apparatus of claim 31, wherein the buffer includes at least one substance selected from the group consisting of Ti, W, Mo and titanium nitride.
33. (Previously presented) The apparatus of claim 20, wherein the at least one vertically aligned carbon nanofiber includes a plurality of fibers that are individually electrically addressable via the electrically conductive interconnect.
34. (Currently amended) The apparatus of claim 20, further comprising a parallel lead for active capacitance cancellation coupled to the electrically conductive interconnect, wherein the parallel lead and the electrically conductive interconnect define a plane that is substantially perpendicular to the at least one vertically aligned carbon nanofiber.
35. (Currently amended) A biosensor, comprising  
an electrically conductive interconnect ~~formed~~ located either on at least a part of an  
insulating surface on a substrate or a (semi)conductive substrate that has been  
coated with an insulating layer; and  
at least one vertically aligned carbon nanofiber coupled to the electrically conductive interconnect.
36. (Currently amended) A field emitting array, comprising  
an electrically conductive interconnect ~~formed~~ located either on at least a part of an  
insulating surface on a substrate or a (semi)conductive substrate that has been  
coated with an insulating layer; and  
at least one vertically aligned carbon nanofiber coupled to the electrically conductive interconnect.

37. (Currently amended) A kit, comprising:

~~— a substrate having an insulating surface;~~

an electrically conductive interconnect ~~formed~~ located either on at least a part of an

insulating surface on a substrate or a (semi)conductive substrate that has been

coated with an insulating layer; and

at least one vertically aligned carbon nanofiber coupled to the electrically conductive interconnect.

38. (Original) The kit of claim 37, further comprising instructions.

39. (Currently amended) The biosensor of claim 35, further comprising an electrochemical passivator coupled to at least a portion of a sidewall surface of the at least one vertically aligned carbon nanofiber.

40. (Previously presented) The biosensor of claim 39, wherein the electrochemical passivator includes a dielectric layer including at least one member selected from the group consisting of SiO<sub>2</sub>, Si<sub>3</sub>N<sub>4</sub> and a polymer.

41. (Previously presented) The biosensor of claim 39, wherein a tip of the at least one vertically aligned carbon nanofiber is not passivated.

42. (Currently amended) The field emitting array of claim 36, further comprising an electrochemical passivator coupled to at least a portion of a sidewall surface of the at least one vertically aligned carbon nanofiber.

43. (Previously presented) The field emitting array of claim 42, wherein the electrochemical passivator includes a dielectric layer including at least one member selected from the group consisting of  $\text{SiO}_2$ ,  $\text{Si}_3\text{N}_4$  and a polymer.
44. (Previously presented) The field emitting array of claim 42, wherein a tip of the at least one vertically aligned carbon nanofiber is not passivated.
45. (Currently amended) The kit of claim 37, further comprising an electrochemical passivator coupled to at least a portion of a sidewall surface of the at least one vertically aligned carbon nanofiber.
46. (Previously presented) The kit of claim 45, wherein the electrochemical passivator includes a dielectric layer including at least one member selected from the group consisting of  $\text{SiO}_2$ ,  $\text{Si}_3\text{N}_4$  and a polymer.
47. (Previously presented) The kit of claim 45, wherein a tip of the at least one vertically aligned carbon nanofiber is not passivated.